Hong Kong Physiotherapy Journal (2015) 33, 95—103

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.hkpj-online.com

MEETING ABSTRACTS

Presented at the Hong Kong Physiotherapy Association Conference, 3—4 October 2015, Hong Kong

Spinal Cord Independence Measure Version III as an effective predictor for discharge destination and walking status in patients with spinal cord injury in Hong Kong

S.P.J. Chan, MPhil, M.W.R. Chau, DHSc, Y.W.E. Wong, MSc, M.C.G. Ho, MSc, M.Y.P. Lau, DHSc
Physiotherapy Department, Kowloon Hospital, Hong Kong

Background and purpose: Spinal Cord Rehabilitation Centre (SCRC) of Kowloon Hospital (KH) was established in 2002. Spinal Cord Independence Measure Version III (SCIM III) is a disability scale designed for spinal cord injury (SCI) patients. The predictive validity was unknown. The current study was to determine the predictive validity of SCIM III.
Methods: SCI patients in inpatient rehabilitation of SCRC KH were enrolled. All patients were evaluated with SCIM III within two days on admission and at discharge. The SCIM III items were scored by direct observation by case physiotherapist. The discharge destination and walking status of the patient were assessed at discharge. Receiver Operating Characteristic Curve was undertook to assess predictive validity of SCIM III in respects of having the patient being discharged home or having the patient able to walk independently at discharge.
Results: 169 subjects aged 60.3±16.4 years were included in the study. At discharge, 81.7% subjects discharged home. 57.4% could walk independently. For criteria of discharge home, the area under the curve (AUC) was 0.74 (95% CI 0.66—0.82, $p \leq 0.01$) and for the criteria as independent walker, AUC was 0.75 (95% CI 0.68—0.82, $p \leq 0.01$). For discharge destination, the optimal cut-off score 29 leaded to a sensitivity of 0.67 and specificity 0.71. For the walking status, the optimal cut-off score 30 leaded to a sensitivity of 0.73 and specificity 0.63.
Conclusion: The predictive validity of the SCIM III was moderate for discharge destination and walking ability in SCI tertiary center. A SCIM III triage system may be developed for compatible rehabilitation and discharge planning.

http://dx.doi.org/10.1016/j.hkpj.2015.09.002

Using STarT Back Screening Tool for managing chronic low back pain and treatment for subgroup with high risk of psychosocial factors

J. Lau, MSc, A. Yeung, MSc, I. Wong, MPhil
Physiotherapy Department, Prince of Wales Hospital, Hong Kong

Background and purpose: Guidelines for chronic low back pain (LBP) recommend evaluation of clinical and psychosocial risk factors. Therapy includes psychological therapy, physical activity and therapeutic exercise. The STarT Back Screening Tool (SBT) was developed to stratify patients into subgroups of low, medium and high risk of psychosocial factors, facilitating treatment targeting toward their physical and psychological needs. This study aimed to correlate the SBT with clinical outcomes for screening Hong Kong LBP patients and to explore the feasibility of a back class management.
Methods: All chronic LBP patients were screened by the validated Chinese SBT in early 2015. Outcomes of pain [Numeric Pain Rating Scale (NPRS)] and disability [Roland Morris Disability Questionnaire (RMDQ), Patient Specific Functional Score (PSFS) and Pain Self-efficacy Questionnaire (PSEQ)] were taken for correlation. For high risk group, a class was developed combining exercise, self-management and coping strategies, with guidance on setting goals and action plans. Mean difference of outcomes was analyzed, along with patient percentage reporting meaningful clinically important difference (MCID).
Results: A total of 345 patients were screened using SBT, with median age 59 and two-thirds female. Its correlation with NPRS, RMDQ, PSFS and PSEQ was moderate, large, small and moderate respectively. One-fifth of patients had low risk and half high risk. Sixty-nine high-risk elderly participated in the back class with high attendance rate. Half reported satisfactory improvement except pain. More than half reported MCID for RMDQ, PSFS and PSEQ.
Conclusion: Use of SBT with targeted strategies for managing LBP in local physiotherapy setting is recommended.

http://dx.doi.org/10.1016/j.hkpj.2015.09.003

Early integration of physiotherapy knowledge acquired into simulated acute care management

W.M. Lo, MPH, S.P.C. Ngai, PhD, M. Mak, PhD
Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, Hong Kong

Background and purpose: Physiotherapy management in the acute setting for cardio-pulmonary and neurological conditions is a great challenge to Physiotherapy students. They need to integrate basic knowledge, theory and skill learnt in classroom into clinical practice. We developed a "case scenario practice" in a simulated acute care environment for students to early integrate their knowledge learnt in class into practice through step-by-step problem based case scenario learning.
Methods: We provided an active learning environment for students to familiarize the hospital environment. Step-by-step guided case scenarios were set up in the university's teaching platform. A simulated acute ward environment with a high fidelity simulator is established to facilitate the students' clinical reasoning and hand-on skills.
Results: 110 of Year 3 Physiotherapy students had taken this extra training in last academic year before their clinical placement. From the post activity survey,

over 90% of the students gave feedback that this activity was helpful in improving their clinical skills and also helpful to prepare them for clinical placement.
Conclusion: Our study of using high fidelity stimulation training in Physiotherapy education for the acute ward setting had shown a positive result from the self-evaluated confidence of the Physiotherapy students after the training. It can also facilitate the active learning approach in the professional education. The potential for expanding the use of the high fidelity simulation in other physiotherapy related areas should be considered.

http://dx.doi.org/10.1016/j.hkpj.2015.09.004

Predictive validity of Hong Kong Chinese Örebro Musculoskeletal Pain Screening Questionnaire

R. Tsang, MSc[a], J. Lau, MSc[b], T. Wong, MPhil[c], E. Lee, PhD[d], S. Kwong, MSc[e], M. Poon, MSc[f], E. So, MSc[g], R. Law, MPhil, for the Working Group on Validation of Örebro Musculoskeletal Pain Screening Questionnaire, Coordinating Committee in Physiotherapy, Hospital Authority
[a]Physiotherapy Department, MacLehose Medical Rehabilitation Centre, Hong Kong
[b]Physiotherapy Department, Prince of Wales Hospital, Hong Kong
[c]Physiotherapy Department, Kowloon Hospital, Hong Kong
[d]Occupational Medicine, New Territories East Cluster, Hong Kong
[e]Physiotherapy Department, Hong Kong East Cluster, Hong Kong
[f]Physiotherapy Department, Queen Elizabeth Hospital, Hong Kong
[g]Physiotherapy Department, Princess Margaret Hospital, Hong Kong

Background and purpose: The Örebro Musculoskeletal Pain Screening Questionnaire (ÖMPSQ) is a tool developed to identify patients with musculoskeletal disorders at risk of developing chronicity and disability. This study aimed to develop a Hong Kong Chinese version of ÖMPSQ and examined its predictive validity and reliabilities in patients with back and neck pain.
Methods: A 21-item Chinese ÖMPSQ (CÖMPSQ-HK) was produced by forward and backward translations of ÖMPSQ. Patients aged 18 to 50 years old, with acute and subacute back and neck pain due to injury on duty or having sick leave for more than 7 days were recruited from 14 physiotherapy outpatient centres of the Hospital Authority. The internal consistency, predictive validity and test-retest reliability of CÖMPSQ-HK were examined using Cronbach alpha, area under the ROC curve with return-to-work status and long-term sick leave as outcomes and intraclass correlation coefficient respectively.
Results: A total of 305 back patients and 160 neck patients were recruited and followed-up for 1 year, with about 30% of patients lost to follow-up. The internal consistency of CÖMPSQ-HK was good. The test-retest reliabilities were satisfactory. The CÖMPSQ-HK was good and fair in predicting return-to-work and long sick leave (longer than 60 days) at 6 months and 1 year for back patients and neck patients respectively.
Conclusion: The CÖMPSQ-HK has fair to good predictive validity in predicting return-to-work and long sick leave at 6 months and 1 year for back and neck patients, with good internal consistency and satisfactory test-retest reliabilities.

http://dx.doi.org/10.1016/j.hkpj.2015.09.005

Using transabdominal real-time ultrasound imaging as biofeedback for pelvic floor muscle training in women with urinary incontinence: A randomized controlled study

N.T.W. Ngai, MSc, C.S. Yeung, PgD, K.W.S. To, MSc, J.C. Yeung, MSc, S.S.F. Kwong, MSc, A.Y.Y. Au, PgD, M.M.K. Chung, MSc
Physiotherapy Department, Ruttonjee and Tang Shiu Kin Hospitals, Hong Kong

Background and purpose: Pelvic floor muscle training (PFMT) is advocated as a first-line conservative therapy for women with urinary incontinence. Vaginal palpation (PV) is standard biofeedback training. However, not all patients are suitable due to contraindications. Transabdominal real-time ultrasound imaging (RUSI) is increasingly used as another form of biofeedback for PFMT due to its convenient application with good reliability. The purpose of this study was to evaluate if PFMT using RUSI is as effective as PV in women with urinary incontinence.
Methods: Female patients aged 18—69 years, with urinary incontinence for at least 3 months, who were referred to our department for PFMT were included. After group education class, patients were randomly assigned into either RUSI group or PV group. Baseline, post intervention and 3 months follow-up data were collected.
Results: 33 patients (RUSIG n=16, PVG n=17) participated (mean age 54.4 ±8.2). 100% RUSIG patients were able to complete the training while 35.3% PVG patients (6 patients) were contraindicated for PV. There were significant improvement in incontinence severity level ($p<0.001$), urinary incontinence episode per week ($p\leq0.044$), pelvic floor muscle strength ($p\leq0.027$), short form of Incontinence Impact Questionnaires ($p\leq0.021$), short form of Urogenital Distress Inventory ($p\leq0.011$) and self-rating improvement ($p\leq0.005$) in both RUSIG and PVG. There were no significant differences between groups on outcome measures.
Conclusion: Both RUSI and PV are effective biofeedback for PFMT in women with urinary incontinence, and their effectiveness is comparable. RUSI has a higher application successful rate.

http://dx.doi.org/10.1016/j.hkpj.2015.09.006

Anthropometric designed neuromuscular restoration programme for the management of shoulder impingement syndrome: A pilot study

I.C.Y. Lam, MSc, T.K.H. Chu, MSc, D.M.T. Ng, MSc, J.S.Y. Cho, PgD, P.M.Y. Lau, DHSc
Physiotherapy Department, Queen Elizabeth Hospital, Hong Kong

Background and purpose: Shoulder impingement syndrome (SIS) is a common musculoskeletal disorder associated with significant morbidity. Neuromuscular restoration programme using a computerized and motorized rotating platform may be a useful adjunct to improve scapular stability and function for patients with SIS. However, little work has been done in this area. This study aimed to evaluate the effectiveness of neuromuscular restoration programme with computerized and motorized rotating platform in the management of SIS.
Methods: Thirty-four subjects aged 18—65 with diagnosis of SIS were recruited from the outpatient Physiotherapy Department of the Queen Elizabeth Hospital. Subjects were allocated into either Rotating Platform Exercise Group (RPEG) or Conventional Exercise Group (CEG). In addition to conventional physiotherapy treatment, all subjects received 30 minutes of corresponding exercise training twice per week for 6 weeks. Outcome measures, including the Numeric Pain Rating Scale (NPRS), Active Range of Motion (AROM) for shoulder flexion and abduction, Lateral Scapular Slide Test (LSST), and the Chinese version of the Disability of the Arm, Shoulder and Hand (DASH-HKPWH), were captured at baseline and after intervention.
Results: All subjects showed a significant improvement in NPRS, AROM for shoulder flexion and abduction, and DASH-HKPWH after intervention. When comparing the two study groups, RPEG demonstrated a significantly greater improvement in NPRS and DASH-HKPWH. However, no significant improvement was found on LSST in both groups.
Conclusion: Conventional physiotherapy intervention and treatment with the rotating platform were with similar effectiveness in improving shoulder AROM, pain and functional performance for patients with SIS, whereas treatment with rotating platform was more superior in pain relief.

http://dx.doi.org/10.1016/j.hkpj.2015.09.007

Pain management programme for Chinese patients: A 10-year outcome review

M.C. Chu, FFPMANZCA[a], R.K.Y. Law, MPhil[b], L.C.T. Cheung, MSc[c], M.L. Ma, MNurs[d], E.Y.W. Tse, MSc[e], T.C.M. Wong, PhD[f], P.P. Chen, FFPMANZCA[g]
[a]Department of Anaesthesia, Pamela Youde Nethersole Eastern Hospital, Hong Kong
[b]Department of Physiotherapy, Hong Kong Sanatorium & Hospital, Hong Kong
[c]Department of Physiotherapy, Alice Ho Miu Ling Nethersole Hospital, Hong Kong
[d]Pain Management Centre, Alice Ho Miu Ling Nethersole Hospital, Hong Kong
[e]Department of Occupational Therapy, Alice Ho Miu Ling Nethersole Hospital, Hong Kong
[f]Department of Clinical Psychology, United Christian Hospital, Hong Kong
[g]Department of Anaesthesiology and Operating Services, Alice Ho Miu Ling Nethersole Hospital, Hong Kong

Background and purpose: Pain management programmes based on cognitive behavioural principles have been recognised as an effective